

Graph Ratio Tables

Lesson 3-3

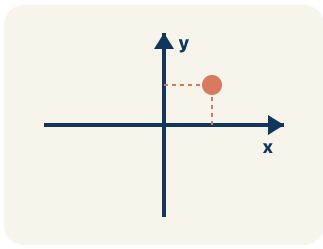
Name: _____

Date: _____

Class: _____

Key Vocabulary Level 2 Standard

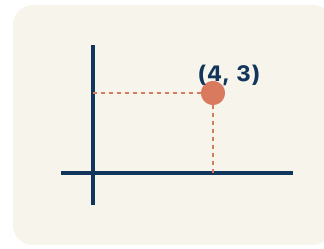
Picture first, then the word, then a plain-language meaning. Say each word out loud.



A + shape made by two number lines crossing at the center point $(0, 0)$

Coordinate plane

Write the definition:



$(3, 6)$ means go right 3, up 6

Ordered pair

Write the definition:



$(1,2), (2,4), (3,6)$ all line up

Linear pattern

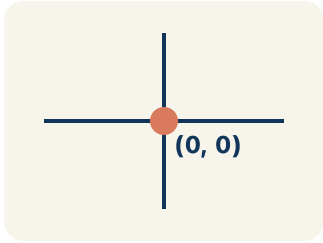
Write the definition:

$$\frac{1}{2} = \frac{2}{4}$$

A straight line from $(0,0)$ through $(2,6)$ and $(4,12)$

Proportional

Write the definition:



The starting corner of the grid at $(0, 0)$

Origin

Write the definition:

Guided Notes

Level 2 Standard



WHAT WE'RE LEARNING TODAY

I can graph the values from a ratio table as points on the coordinate plane.



Fill in each blank as we go. Use the Word Bank to help you.



WORD BANK – FILL EACH BLANK WITH THE BEST WORD

Coordinate plane

Ordered pair

Linear pattern

Proportional

Origin



Tap any word to see what it means and a picture.

1 The flat grid formed by a horizontal and a vertical number line is the

2 A set of two numbers (x, y) that names a point is an .

3 When graphed points form a straight line, they show a .

4 Two quantities that always keep the same ratio are .

5 The point $(0, 0)$ where the two axes meet is the .



Watch & Try – Worked Examples

See the notes in action: watch one worked all the way through, then try the next with the same steps.

 **I do – watch**

Follow each step as your teacher solves it.

Problem: A ratio table shows (2, 6), (4, 12), and (6, 18). Which ordered pair comes next if the pattern continues?

- A. (8, 24)
- B. (7, 20)
- C. (8, 22)
- D. (10, 24)

Step 1 The pattern adds 2 to x and 6 to y each time.

Step 2 After (6, 18): $x = 6 + 2 = 8$, $y = 18 + 6 = 24$.

Step 3 The next point is (8, 24).

 **Answer:** A. (8, 24)


 **Try – put the steps in order**

Drag the cards (or use the ▲ ▼ buttons) to put the solution steps in the right order, then press **Check**.

After (6, 18): $x = 6 + 2 = 8$, $y = 18 + 6 = 24$.

The next point is (8, 24).

The pattern adds 2 to x and 6 to y each time.

 **We do – together**

Solve this one with your class using the same steps.

Problem: When you graph equivalent ratios, the points will always form what shape?


- A. A straight line through the origin
- B. A curved line
- C. A zigzag
- D. A circle

Step 1

Step 2

Step 3

Answer:

 **You do – your turn**

Now try one on your own. Show every step.

Problem: A ratio table shows (2, 8), (3, 12), and (5, 20). What is the y-value when $x = 7$?

- A. 28
- B. 24
- C. 21
- D. 35

Show your work:

Try It

Solve on your own. Check the answer key when you are done.

1. The smoothie recipe is 1 cup of blueberries to 2 scoops of yogurt. If cups go on the x-axis and scoops on the y-axis, which ordered pair shows 3 cups of blueberries?

- A. (3, 6)
- B. (6, 3)
- C. (3, 5)
- D. (3, 3)

Show your work:

2. On the smoothie graph, every point follows the rule scoops = $2 \times$ cups. Which equation describes the pattern between x (cups) and y (scoops)?

- A. $y = 2x$
- B. $y = x + 2$
- C. $y = x \div 2$
- D. $x = 2y$

Show your work:

Stretch Your Thinking

Level 2 enrichment

Challenge task — explain your reasoning in full sentences.

A student plots the points (1, 3), (2, 6), (3, 9), and (4, 15) from a ratio table. She says they form a straight line because they go up. Is she correct? Explain how to check.

Show your work:

Reflect — Exit Ticket

A ratio table shows cups of rice to cups of water: (1, 2), (2, 4), (3, 6). If you plot these points, the line passes through which point?

- A. (5, 10)
- B. (4, 6)
- C. (5, 8)
- D. (6, 10)

Your answer:
